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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,062	02/14/2006	Joachim Hornegger	32860-000866/US	6521
30596 7590 09/14/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195			EXAMINER NGUYEN, PHU K	
			ART UNIT 2628	PAPER NUMBER
			MAIL DATE 09/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,062	Applicant(s) HORNEGGER ET AL.	
	Examiner Phu K. Nguyen	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-11,16-20 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 3-5,12-15 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2300

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/3/06&3/15/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 6-11, 16-20, 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by HSU et al. (A Constraint-based Manipulator Toolset for Editing 3D Objects).

As per claim 1, Hsu teaches the claimed "computer-aided selection method for a part of a volume", comprising: "evaluating, using a computer, only a selected part of the volume" (Hsu, page 175, column 2, 2nd paragraph of section 5: Snap-Dragging and Constraints, the selected faces of the two objects), "wherein the selected part is in the form of a polyhedron with polyhedron surfaces, with each polyhedron surface being bounded by polyhedron edges and with each polyhedron edge being bounded by polyhedron corners bounding only two polyhedron surfaces" (Hsu, page 175, column 1, 1st paragraph), "wherein the polyhedron corners are for the computer in order to determine the selected part, and wherein the polyhedron edges and polyhedron surfaces are determined automatically by the computer on the basis of the polyhedron corners" (Hsu, figures 13-14; the selected vertices for reference to rotate).

Claim 2 adds into claim 1 "a user determines repositioning for one of the polyhedron corners for the computer, and wherein the computer then redetermines those polyhedron edges and polyhedron surfaces which contain the repositioned

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polyhedron corner in order to determine the selected part" (Hsu, page 175, 1st column to 2nd column, line 17).

Claim 6 adds into claim 2 "the repositioning of the polyhedron corner is determined for the computer by the user shifting the polyhedron corner along a straight line which is defined before the repositioning of the polyhedron corner" (Hsu, page 175, column 2, 2nd paragraph).

Claim 7 adds into claim 6 "the polyhedron corner to be repositioned is selected by the user before the repositioning, and wherein the straight line is automatically determined by the computer on the basis of the selected polyhedron corner" (Hsu, page 175, column 2, 2nd paragraph).

Claim 8 adds into claim 6 "the straight line is determined for the computer by the user before the repositioning of the polyhedron corner" (Hsu, page 175, column 2, 2nd paragraph).

Claim 9 adds into claim 2 "a new polyhedron corner is additionally determined for the computer by the user" (Hsu, figure 14).

Claim 10 adds into claim 9 "the new polyhedron corner is determined by selection of at least one of a polyhedron edge a polyhedron surface, and by

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subsequently placing the new polyhedron corner within the at least one of the selected polyhedron edge and polyhedron surface" (Hsu, page 175, column 1, 1st paragraph).

Claim 11 adds into claim 2 "an unnecessary polyhedron corner is deleted by the user" (Hsu, page 177, column 1, section 6, Geom3d).

Claims 16-19 claim a storage medium, program product which are based on the method of claim 1; therefore, they are rejected under the same reason.

Claim 20 adds into claim 1 "displaying the selected part of the volume via an output medium" (Hsu, Abstract, CAD computer system).

Claim 22 adds into claim 2 "a new polyhedron corner is additionally determined for the computer interactively by the user" (Hsu, figure 14; and page 177, column 1, section 6, Geom3d).

Claim 23 adds into claim 2 "an unnecessary polyhedron corner is deleted by the user interactively" (Hsu, page 177, column 1, section 6, Geom3d).

Claim 24 adds into claim 13 "an unnecessary polyhedron edge is deleted by the user interactively" (Hsu, page 177, column 1, section 6, Geom3d).

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 16-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. ***

In claim 16, the "control signals" stored in a computer readable medium is a form of energy, and does not fall within any of the categories of patentable subject matter set forth in section 101. O'Reilly, 56 U.S. (15 How.) at 112-14.

In claims 17, 18, the claimed "computer program" are not physical things and therefore not statutory under 35 USC 101. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Disclosure does not teaches a storage of signals in claim 16; a program without a system to perform the method, nor how the system is programmed.

Claims 3-5, 12-15 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 3, and its dependent claims 5, 21, the allowable feature is ““at least one of the polyhedron surfaces which contain the polyhedron corner to be repositioned is in the form of a polygon with more than three polyhedron corners, and wherein this polyhedron surface is replaced by the computer by polyhedron surfaces which are in the form of triangles, each containing one polyhedron edge which is not bounded by the polyhedron corner to be repositioned of the polygon as well as the repositioned polyhedron corner.””

In claim 4, the allowable feature is “at least one of the polyhedron surfaces which contain the polyhedron corner to be repositioned is a polygon with more than three polyhedron corners, and wherein this polyhedron surface is replaced by the computer by two polyhedron surfaces, wherein one is defined by the polyhedron corners of the polygon which are not to be repositioned, and the other is defined by those polyhedron corners of the polygons which are immediately adjacent to the polyhedron corner to be repositioned, and by the”

repositioned polyhedron corner. “

In claim 12, the allowable feature is **“the deletion of the unnecessary polyhedron corner by the computer is permitted only when the unnecessary polyhedron corner is a common polyhedron corner of at least two mutually adjacent polyhedron surfaces which lie on a common plane.”**

In claim 13 and its dependent claims 14-15, the allowable feature is **“at least one of the polyhedron surfaces which contain the polyhedron corner to be repositioned is a polygon with more than three polyhedron corners, and wherein the user inserts an additional polyhedron edge which is bounded by two polyhedron corners, which were previously not immediately adjacent, of the polygon.”**

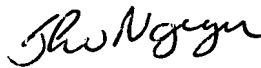
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phu K. Nguyen
September 8, 2007


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